

REMARKS

Claims 1-8 are pending. Claims 1, 2, and 4-8 have been amended. No new matter has been introduced. Reexamination and reconsideration of the present application are respectfully requested.

In the March 30 Office Action, the Examiner objected to the title of the invention as being nondescript. (*March 30 Office Action, page 2*) Applicant has amended the title of the invention and respectfully submits that the title of the invention, as amended is descriptive and the rejection should be withdrawn.

The Examiner objected to the abstract of the disclosure under MPEP § 608.01 (b). (*March 30 Office Action, page 2*) Applicant has amended the abstract in view of the Examiner's comments. Accordingly, Applicant respectfully submits that the objection should be withdrawn.

The Examiner rejected claims 7 and 8 under 35 U.S.C. § 101 as being directed to non-statutory subject matter. (*March 30 Office Action, page 2*) Applicant has amended claims 7 and 8 in view of the Examiner's comments. Accordingly, Applicant respectfully submits that claim 7 and 8, as amended are directed to statutory subject matter, and the rejection should be withdrawn.

The Examiner rejected claims 1-4 under 35 U.S.C. § 103 (a) as being unpatentable over Ito et al., U.S. Patent No. 5,315,402 (hereinafter Ito) in view of Ohta et al., U.S. Patent No. 5,579,294 (hereinafter Ohta). (*March 30 Office Action, page 3*) The Examiner rejected claims 5-8 under 35 U.S.C. § 103 (a) as being unpatentable over AAPA, page 2, lines 7-16 of Applicant's specification, in view of Watanabe et al., U.S. Patent No. 6,687,202 (hereinafter Watanabe). (*March 30 Office Action, page 6*) The Examiner rejected claims 9 and 12-14 under 35 U.S.C. § 102 (e) as being anticipated by Seo, U.S. Patent No. 6,661,759 (hereinafter Seo). (*December 14*

Independent claim 1, as amended, now recites:

An information recording apparatus for recording information by radiating a laser beam on a disc, comprising:

a disc driver for selectively executing a constant linear velocity mode of driving the disc at a constant linear velocity and a constant angular velocity mode of driving the disc at a constant angular velocity;

a laser optical system for radiating a laser beam on the disc; and

a controller for detecting a laser power of the laser beam radiated by said laser optical system and controlling the laser power of the laser beam radiated by said laser optical system in such a manner that the detected laser power becomes equal to a target value of a laser power to be radiated,

wherein said controller sets a response speed for changing the laser power from a first value to a second value during recording in the constant angular velocity mode slower than a response speed for changing the laser power from the first value to the second value during recording in the constant linear velocity mode.

The Ito reference does not disclose, teach, or suggest the apparatus of independent claim 1, as amended. First, as the Examiner has acknowledged that “Ito does not disclose that the controller detects a laser power of the laser beam radiated by said laser optical system and controls the laser power of the laser beam radiated by said laser optical system in such a manner that the detected laser power becomes equal to a target value of a laser power to be radiated.”

(March 30 Office Action, page 4)

In addition, unlike the apparatus specified in claim 1, as amended, Ito does not disclose an information recording apparatus “*wherein said controller sets a response speed for changing the laser power from a first value to a second value during recording in the constant angular velocity mode slower than a response speed for changing the laser power from the first value to the second value during recording in the constant linear velocity mode.*” Instead, Ito is directed to a video signal recording device for recording and reproducing video signals on an

optical memory and increasing the recording capacity of an optical disc memory. (*Ito, Col. 1, lines 5-15 and Col. 2, lines 42-46*) Ito discloses that the laser power is increased beyond that used in conventional devices, thereby increasing the amplitude of the reproduced signal and enabling reduction of the minimal length of recording bits necessary for fine reproduced image quality. (*Ito, Col. 1, lines 5-15 and Col. 2, lines 42-46*) When the disk rotates at a Constant Linear Velocity (CLV), the duty factor of the laser driving pulse is set to a constant value which is less than 50% and when the disk rotates in Constant Angular Velocity (CAV), the duty factor and laser driving pulse are gradually increased. However, this is not the same as an apparatus ***“wherein said controller sets a response speed for changing the laser power from a first value to a second value during recording in the constant angular velocity mode slower than a response speed for changing the laser power from the first value to the second value during recording in the constant linear velocity mode.”*** Accordingly, the Applicant respectfully submits that independent claim 1 distinguishes over the Ito reference.

The Ohta reference does not make up for the deficiencies of Ito. The Examiner utilizes Ohta to show a controller for detecting a laser power of the laser beam radiated by said laser optical system and controlling the laser power of the laser beam radiated by said laser optical system in such a manner that the detected laser power becomes equal to a target value of a laser power to be radiated. However, the combination of Ito and Ohta does not teach an apparatus ***“wherein said controller sets a response speed for changing the laser power from a first value to a second value during recording in the constant angular velocity mode slower than a response speed for changing the laser power from the first value to the second value during recording in the constant linear velocity mode.”*** Accordingly, the Applicant respectfully submits that independent claim 1 distinguishes over Ito in combination with Ohta.

Independent claim 4, as amended, recites similar limitations to independent claim 1, as amended. Accordingly, Applicant respectfully submits that independent claim 4 distinguishes over Ito in combination with Ohta for reasons similar to those set forth above with respect to claim 1.

Claims 2 and 3 depend from independent claim 1. Accordingly Applicant respectfully submits that claim 2 and 3 distinguishes over Ito in combination with Ohta for the same reasons set forth above with respect to claim 1.

Independent claim 5, as amended now recites:

A driving method for a recording medium, comprising:

- (a) determining a record start instruction for a disc;
- (b) determining whether a record position is in a constant angular velocity area;
- (c) *instructing a constant angular velocity drive and setting a first servo gain of a servo-loop controlling the laser power, if the record position is in the constant angular velocity area;*
- (d) detecting a transition from the constant angular velocity area to a constant linear velocity area; and
- (e) *instructing a constant linear velocity drive and setting a second servo gain of the servo-loop controlling the laser power larger than the first servo gain, if the transition is detected.*

The AAPA reference does not disclose, suggest or teach the method of independent claim 5, as amended. As the Examiner has acknowledged, unlike the method specified in independent claim 5, as amended, AAPA does not disclose “*instructing a constant angular velocity drive and setting a first servo gain of a servo-loop controlling the laser power, if the record position is in the constant angular velocity area*” and “*instructing a constant linear velocity drive and setting a second servo gain of the servo-loop controlling the laser power larger than the first servo gain, if the transition is detected.*”

The Watanabe reference does not make up for the deficiencies of the AAPA reference.

The Watanabe reference is directed to a control system in an optical drive system which enable saving of electricity. (*Watanabe; Col. 1, lines 10-21 and Col. 2, 35-39*) When the recorder is operating using a CAV method and the velocity detected is lower than a reference velocity, gain selector 10 judges that the pickup 2 is located at one of the inner tracks of the optical disk 1 and decreases the loop gain for the focus servo system 50. Conversely, when the velocity detected is higher than the reference velocity, gain selector 10 judges that the pickup is located at one of the outer tracks of the optical disk 1 and increases the loop gain for the focus servo system 50. However, when the recorder is operating using a CLV method and the velocity detected is higher than the reference velocity, gain selector 10 decreases the loop gain for the focus servo system 50. (*Watanabe; Col. 5, lines 41-58 and Col 6, lines 43-59*) Nevertheless, the combination of the AAPA and Watanabe references does not teach ***“instructing a constant angular velocity drive and setting a first servo gain of a servo-loop controlling the laser power, if the record position is in the constant angular velocity area”*** and ***“instructing a constant linear velocity drive and setting a second servo gain of the servo-loop controlling the laser power larger than the first servo gain, if the transition is detected.”*** Accordingly, Applicant respectfully submits that claim 5, as amended distinguishes over the AAPA reference in combination with Watanabe.

Independent claim 7, as amended, recites similar limitations to independent claim 5, as amended. Accordingly, Applicant respectfully submits that claim 7 distinguishes over the AAPA reference in combination with Watanabe for reasons similar to those set forth above with respect to independent claim 5.

Claims 6 and 8 depend from claims 5 and 7, respectively. Accordingly, Applicant respectfully submits that claims 6 and 8 distinguish over the AAPA reference in combination

with Watanabe for the same reasons set forth above with respect to independent claims 5 and 7.

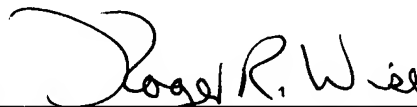
In view of the foregoing, Applicant believes that the claims are in condition for allowance. If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at the Los Angeles, California telephone number (213) 488-7100 to discuss the steps necessary for placing the application in condition for allowance should the Examiner believe that such a telephone conference call would advance prosecution of the application.

Respectfully submitted,

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By: _____



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